

II. Amendments to the Claims

1. (Currently amended) A hydraulic coupling system, comprising

a pump;

a controller;

a clutch assembly including an actuator and a multi-disk clutch pack coupled to the actuator, the pump pressuring a fluid in the actuator to engage the clutch pack and pumping the fluid through the clutch pack to cool the clutch pack ~~under the direction of the controller~~; and

a valve for maintaining the fluid pumped to the actuator at a higher pressure than the pressure of the fluid pumped through the clutch pack to cool the clutch; and

a controller which transmits pulse-width modulated control signals to the pump to control the operation of the pump and pulse-width modulated control signals to the valve to control the operation of the valve.

2. and 3. (Cancelled)

4. (Original) The system of claim 1 further comprising a two-way valve which provides a preload pressure to the system when the pump is not operating and the clutch pack is disengaged.



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5. (Original) The system of claim 1 further comprising a pilot valve which provides a preload pressure to the system when the pump is not operating and the clutch pack is disengaged.
6. (Original) The system of claim 1 further comprising an accumulator for compensating for fluid leakage in the system.
7. (Original) The system of claim 1 wherein the pump is a gerotor, vane or gear pump.

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